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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,870	06/08/2007	Noel R.M. de Keyzer	L0012US	9678

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KRATON POLYMERS U.S. LLC
16400 Park Row
HOUSTON, TX 77084

EXAMINER

SCOTT, ANGELA C

ART UNIT	PAPER NUMBER
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1767

NOTIFICATION DATE	DELIVERY MODE
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03/12/2012

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

kratonip@kraton.com

Office Action Summary	Application No. 10/584,870	Applicant(s) DE KEYZER ET AL.	
	Examiner Angela C. Scott	Art Unit 1767	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 11-29 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 11-29 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Applicant's response of November 17, 2011 has been fully considered. No claims have been amended, canceled or added since the last response. Claims 11-29 are pending.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 11-25 rejected under 35 U.S.C. 103(a) as being unpatentable over de Keyzer et al. (WO 02/057386).

de Keyzer et al. teaches an adhesive composition for pressure sensitive adhesives, packaging tapes and labels, and multipurpose hot-melt adhesives (Page 1, lines 10-15) comprising a block copolymer, a mixed aliphatic/aromatic hydrocarbon resin, and a plasticizing oil (Page 3, lines 25-27). In Tables 1 and 2, Polymer E exemplifies the block copolymer as a styrene-butadiene/isoprene(B/I)-styrene copolymer with a (B/I) ratio of 1:1 (50/50), a polystyrene content of 17.6%, and a coupling efficiency of 87%. The block copolymer preferably has a weight average molecular weight ranging from 100,000 to 500,000, preferably from 150,000 to 250,000 (Page 5, lines 21-25). The block copolymer preferably contain 1,2-vinyl bonds and/or 3,4-vinyl bonds in a proportion of at most 15 weight percent, based on the weight of the conjugated diene (Page 5, lines 25-30). Table 12, example F30 shows Polymer E combined with WINGTACK ET as the hydrocarbon resin and C-956 as the plasticizing oil. WINGTACK ET is an aromatically modified aliphatic hydrocarbon resin with a softening point of 94° C, an aromaticity of 4.2% (Page 21, Table 3), and a glass transition temperature (midpoint) of 50° C (Technical Data Sheet). C-956 is a naphthenic oil which is a type of mineral oil (Page 22, Table 3). According to Example F30 in Table 12, the block copolymer is present in an amount of 44% by weight, the resin is present in an amount of 48% by weight, and the oil is present in an amount of 7% by weight.

de Keyzer et al. does not teach that the coupling efficiency of the block copolymer is between 63% and 80%. However, a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*,

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778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). MPEP 2144.05. From examples, de Keyzer et al. shows polymers which have a coupling efficiency in the range of 81% to 87%. While the claimed range, 63% to 80%, and the prior art range, 81% to 87%, do not overlap, they are close enough that, at the time of the invention, one skilled in the art would have found it obvious to use the polymers of de Keyzer et al. and would have been motivated to do so because one would have expected the polymers to have the same properties and behave similarly, especially when used in adhesive compositions.

While the specific example of Polymer E in Table 2 has a molecular weight of 195,000, which is outside of the narrow range of 180,000 to 190,000 and more specifically 180,000 to 185,000, the claimed range lies completely within the preferred range taught by de Keyzer et al. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). MPEP 2144.05. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use a polymer with a molecular weight in the range of 180,000 to 195,000, and more specifically of 180,000 to 185,000, and would have been motivated to do so because de Keyzer et al. teaches that this molecular weight range is suitable and preferable for use in the disclosed invention.

de Keyzer et al. does not disclose that the composition has a stable hot-melt viscosity of plus or minus 5% of the starting value after 24 hours at 177° C and a hot-melt viscosity of ≥ 80 Pa·s at 177° C. The Office realizes that all of the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed ingredients and amounts, and a substantially similar process. Specifically, both composition contains similar block copolymers, a tackifying resin and mineral oil and are prepared through such means as a mechanically mixing process, a hot-melt process, or a solvent process (de Keyzer et al., page 10, lines 15-30 and instant application ¶55 of the PG-PUB). Therefore, the claimed effects and physical properties, i.e. a stable hot-melt viscosity of plus or minus 5% of the starting value after 24 hours at 177° C and a hot-melt viscosity of ≥ 80 Pa·s at 177° C, would implicitly be achieved by resulting composition. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the

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Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." *See, e.g., PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355. If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). MPEP 2111.03.

Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Keyzer et al. (WO 02/057386).

de Keyzer et al. teaches an adhesive composition comprising a block copolymer (Page 3, lines 25-27). In Tables 1 and 2, Polymer E exemplifies the block copolymer as a styrene-butadiene/isoprene(B/I)-styrene copolymer with a (B/I) ratio of 1:1, a polystyrene content of 17.6%, and a coupling efficiency of 87%. The block copolymer preferably has a weight average molecular weight ranging from 100,000 to 500,000, preferably from 150,000 to 250,000 (Page 5, lines 21-25). The block copolymer preferably contain 1,2-vinyl bonds and/or 3,4-vinyl bonds in a proportion of at most 15 weight percent, based on the weight of the conjugated diene (Page 5, lines 25-30). According to Example F30 in Table 12, the block copolymer is present in an amount of 44% by weight.

de Keyzer et al. does not teach that the coupling efficiency of the block copolymer is between 63% and 80%. However, a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). MPEP 2144.05. From examples, de Keyzer et

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al. shows polymers which have a coupling efficiency in the range of 81% to 87%. While the claimed range, 63% to 80%, and the prior art range, 81% to 87%, do not overlap, they are close enough that, at the time of the invention, one skilled in the art would have found it obvious to use the polymers of de Keyzer et al. and would have been motivated to do so because one would have expected the polymers to have the same properties and behave similarly, especially when used in adhesive compositions.

While the specific example of Polymer E in Table 2 has a molecular weight of 195,000, which is outside of the narrow range of 180,000 to 190,000 and more specifically 180,000 to 185,000, the claimed range lies completely within the preferred range taught by de Keyzer et al. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). MPEP 2144.05. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use a polymer with a molecular weight in the range of 180,000 to 195,000, and more specifically of 180,000 to 185,000, and would have been motivated to do so because de Keyzer et al. teaches that this molecular weight range is suitable and preferable for use in the disclosed invention.

The transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials or steps “and those that do not materially affect the basic and novel characteristic(s)” of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, “consisting essentially of” will be construed as equivalent to “comprising.” *See, e.g., PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355. If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of “consisting essentially of,” applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant’s invention. *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). MPEP 2111.03.

Response to Arguments

Applicant's arguments filed November 17, 2011 have been fully considered but they are not persuasive.

Applicant argues that the Office's position is that a block copolymer, tackifying resin and mineral oil will result in a composition having the claimed properties. This is not true. The Office Action issued on August 19, 2011 states that the instant invention and the de Keyzer et al. reference have similar block copolymers, a tackifying resin and mineral oil and are prepared by similar methods. The tackifying resins are the same in both compositions and both compositions contain a naphthenic oil as the mineral oil. Additionally, the block copolymers are the same except for the coupling efficiency and the molecular weight and the copolymers are very close in these areas. Therefore, it is not just any block copolymer, tackifying resin and mineral oil combined together that would give the claimed properties. A case has been made for the obviousness of the claimed composition in view of the reference composition and it is this particular composition that would result in these properties, not a generalized composition containing those 3 components.

Applicant states that it is not the applicant's responsibility to present good side by side comparison data of the coupling efficiencies of the de Keyzer et al. reference and the present invention and that it is instead the responsibility of the Office to teach the limitations of the claims. In response to this, the Office realizes the responsibilities it has. The limitation regarding the coupling efficiency has been addressed in all of the Office Actions up to this point, including the current one. This limitation has been addressed through the teaching that a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). In order to rebut this particular rejection, good side by side comparison data must be presented. This data has not been presented to date. Moreover, while a piece of prior art has not been cited that specifically teaches the claimed coupling efficiency range, this range has been addressed through the combination of the de Keyzer et al. reference and the doctrine set forth in case law in the MPEP.

While applicant does argue the differences that allegedly occur between a copolymer with coupling efficiency between 63-80% and a copolymer with a coupling efficiency between 81-87%, this is only attorney argument until proper evidence is shown. MPEP 716.01(c) II.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571)270-3303. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. C. S./

Examiner, Art Unit 1767

/Mark Eashoo/

Supervisory Patent Examiner, Art Unit 1767